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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,013	08/05/2005	Stephen Temple	27754/24867	9262
4743	7590	02/09/2007	EXAMINER	
MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			NGUYEN, LAM S	
			ART UNIT	PAPER NUMBER
			2853	
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	02/09/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/520,013	TEMPLE, STEPHEN	
	<b>Examiner</b>	<b>Art Unit</b>	
	LAM S. NGUYEN	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 03 January 2007.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 25-30 and 33-37 is/are rejected.
- 7) Claim(s) 31-32 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 December 2004 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/29/04, 02/14/05</u> .	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Election/Restrictions***

In response to the restriction requirement, the applicant elected claims 25-37 without traverse for further examination. As a result, claims 1-24 are withdrawn from consideration.

### ***Claim Objections***

Claim 30 is objected to because of the following informalities: The claim recites the limitation “the measured print efficiency” with insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 25-26, 33-34, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Mantell et al. (EP 0 767 061 B1).

### ***Regarding to claims 25, 33:***

Mantel et al. discloses a method of ink jet printing a representation on a print medium of an array of print data pixels (*FIG. 12: Each ink drop forms a pixel*) comprising the steps of distributing print data from said array of print data pixels over an array of super pixels (*FIG. 12, element 124: The super pixels is formed by an overlapped pair of ink drops*) in a distribution function such that each super pixel receives a print data contribution from at least two print data

pixels (*FIG. 12, element 124: Because each super pixels is formed by an overlapped pair of ink drops, print data for a super pixel is contributed from print data corresponding to the pair of ink drops*) and each print data pixel contributes print data to at least two super pixels (*FIG. 12: As shown by reference 126, each ink drop (pixel) overlaps with at least two other ink drops (pixels); In other word, print data associated to each ink drop (pixel) contributes print data to at least two or three super pixels*); and forming print pixels on the medium such that each print pixel receives print contribution from at least two super pixels (*FIG. 12: Regarding to reference 126, because each ink drop (pixel) joins to other adjacent ink drops to form at least two super pixels, each ink drop receives contribution from those two super pixels*).

**Regarding to claims 26, 34:** wherein each super pixel receives a print data contribution from at least three print data pixels (*FIG. 13-14*).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 27-30, 35-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mantell et al. (EP 0 767 061 B1) in view of Silverbrook (WO 02/02330 A1).

Mantell et al. discloses the claimed invention as discussed above except wherein the print data contribution varies in sign between said print data pixels, wherein the at least two super pixels from which a print pixel receives print contribution, receive print data contributions from different combinations of print data pixels, further comprising the step of measuring the print

efficiency of each super pixel, distribution function includes comprising distributing the measured print efficiency as print data.

Silverbrook discloses a printing method operated in an ink jet printing apparatus in which super pixels are formed on a printing medium accordantly to print efficiency by contributing from different combination or varying in sign of print data pixels (*FIGs. 3 and 5: The super pixels are formed by combination of multiple pixels 24 accordantly to the print efficiency due to the defective failure of a nozzle*).

Therefore, it would have been obvious for one having ordinary skill in the art at the time invention was made to modify Mantell's printing apparatus to include measuring print efficiency and forming pixels accordantly as disclosed by Silverbrook. The motivation for doing so would have been to compensate for failure of ink ejection from a nozzle to correctly print dots of ink at specific locations as taught by Silverbrook (*page 1, lines 28-30*).

#### ***Allowable Subject Matter***

3. Claims 31-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Regarding to claim 31:** The primary reasons for the indication of the allowability of the claim is the inclusions therein, in combination as currently claimed, of the limitation that wherein the step of forming print pixels on the medium such that each print pixel receives print contribution from at least two super pixels comprises the steps at each print pixel of depositing ink in an amount determined by one of the super pixels from which that print pixel receives print contribution and, while that deposited ink remains fluid, depositing ink in an amount determined

by an other of the super pixels from which that print pixel receives print contribution is neither disclosed nor taught by the cited prior art of record, alone or in combination.

Claim 32 is allowed because they depend directly/indirectly on claim 31.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S. NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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